

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference PAT 838W-90	FOR FURTHER ACTION	See item 4 below
International application No. PCT/CA2004/000529	International filing date (<i>day/month/year</i>) 07 April 2004 (07.04.2004)	Priority date (<i>day/month/year</i>) 07 April 2003 (07.04.2003)]
International Patent Classification (IPC) or national classification and IPC ⁷ C08F 220/34, 220/60		
Applicant RIMON THERAPEUTICS LTD.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input checked="" type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 740 14 35	Date of issuance of this report 14 October 2005 (14.10.2005) Authorized officer <p style="text-align: center;">Athina Nickitas-Etienne</p> Telephone No. +41 22 338 89 95
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Form PCT/IB/373 (January 2004)

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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

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To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION See paragraph 2 below

International application No.
PCT/CA2004/000529

International filing date (day/month/year)
07.04.2004

Priority date (day/month/year)
07.04.2003

International Patent Classification (IPC) or both national classification and IPC
C08F220/34, C08F220/60

Applicant
RIMON THERAPEUTICS LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/CA2004/000529

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/CA2004/000529

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	6-10,22
	No: Claims	1-5,11-21
Inventive step (IS)	Yes: Claims	
	No: Claims	1-22
Industrial applicability (IA)	Yes: Claims	1-22
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/CA2004/000529

Re Item V.

The following document is referred to in this communication:

D1: EP A 0331528

D2: WO A 01/19878

D3: US A 6096800

1. Novelty (Art. 33(2) PCT)

The subject-matter of claims 1-5,11-21 is not novel for the following reasons.

1.1. D1 discloses an antimicrobial copolymer of ethylene and hydrophilic methacrylamide comonomer as claimed. Further unsaturated comonomers can be present (see search report).

The polymer can be used as antimicrobial preparation in medical field and hygienic articles.

Therefore the subject-matter of claims 1-5,11,13-21 is not novel in view of D1.

1.2. D2 discloses an antimicrobial copolymer of methacrylamide monomer and one or more ethylenically unsaturated hydrophobic comonomers (e.g. methyl methacrylate, olefins) as claimed.

This copolymer can be grafted on a polymeric substrate and it is used as antimicrobial coating in medical and hygienic field (see search report).

Therefore the subject-matter of claims 1-5,11-21 is not novel in view of D2.

1.3. D3 discloses an antimicrobial polymer comprising a hydrophilic polymer (e.g. aminoethyl acrylate) grafted on a polymer substrate as claimed (e.g. polyolefins)(see search report).

Therefore the subject-matter of claims 1-3,5,11,20,21 is not novel in view of D3.

2. Inventive Step (Art. 33(3) PCT)

The subject-matter of claims 1-22 is not inventive for the following reasons.

2.1. Being not novel, the subject-matter of claims 1-5,11-21 cannot be regarded as inventive either.

2.2. Dependent claims 6-10, 22 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows.

Document D2 is regarded as being the closest prior art and discloses (see above 1.2. and search report) an antimicrobial copolymer comprising hydrophilic and hydrophobic monomers as claimed.

The present application differs from D2 in that the antimicrobial copolymer comprises specific comonomers (that is AMA, PPO-MA and further monomers) in defined amounts.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/CA2004/000529

Since no examples on file illustrate the advantages or the effects deriving from the use of the feature above over D2, the problem to be solved by the present invention may therefore be regarded as the preparation of an alternative antimicrobial copolymer.

In the absence of clear examples according to the invention and/or comparative examples, the copolymer as claimed in claims 6-10,22 appears as a mere alternative to those described in the prior art document D2.

Note that it is not evident whether the use of AMA and PPO-MA as comonomers in the antimicrobial polymers leads to a technical effect over the copolymers of D2 or whether they have been chosen arbitrarily among the number of hydrophilic and hydrophobic monomers.

Therefore the subject-matter of claims 6-10,22 cannot be regarded as inventive either.

2.3. Thus the subject-matter of claims 1-22 is not inventive.

3. The subject-matter of claims 1-22 meets the requirements of Article 33(4) PCT, with regard to industrial applicability.

Re Item VII.

1. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D3 is not mentioned in the description, nor are these documents identified therein.

Re Item VIII.

The application does not meet the requirements of Article 6 PCT for the following reasons.

1. Claims 4,5,11-16,18 are not clearly supported in the description.
2. The term "derivatizable" referring to a third component of the antimicrobial polymer has no well-recognised meaning and leaves the reader in doubt as to the meaning of the technical feature to which they refers, thereby rendering the definition of the subject-matter of said claims 13-16,18,19 unclear.
3. The examples according to the invention and the comparative examples, if any, are not clearly distinguishable on file.
4. The article "wound dressing" claimed in claim 21 is not supported in the description (see page 6).